PEORIA LAKE

HABITAT REHABILITATION AND ENHANCEMENT PROJECT

Peoria Pool
Illinois Waterway River Miles
162.0 - 181.0

Peoria and Woodford Counties, Illinois
Rock Island District

RESOURCE PROBLEM:

Sedimentation has destroyed much of the fish and wildlife habitat value of Peoria Lake. The lake has lost approximately 68% of its original volume and the average depth has been reduced from 8.1 to 2.6 feet since 1903. The shallow depths from silt accumulation promote re-suspension of sediments, resulting in elevated turbidity levels. The soft lake bottom is not receptive to the rooting and survival of aquatic plants for waterfowl consumption and aquatic use. Sediment build up in the East River channel has reduced the aquatic habitat of the lake.

PROJECT FEATURES:

* Constructed the Barrier and Overburden Islands by mechanical dredging and stacking approximately 300,000 cubic yards of lake sediments about 1.0-mile long;
* Excavated a channel approximately 3,550 feet long through an existing silt plug out to the main channel (to reestablish flow through the East River channel). Constructed a rock closure structure at the upper end of the Barrier and Overburden Islands to help reduce the amount of sediment that enters this Barrier Island channel and Goose Lake in order to provide over-wintering fish habitat;
* Constructed approximately 18,585 feet of low level levees, 3 water control structures, and a pump station to allow for independent water level management within the 3 cells of the forested wetland management unit; and,
* Re-vegetate dredged material placement sites by planting selected vegetation.

PROJECT OUTPUTS:

The Barrier and Overburden Islands have impeded wave action on a portion of the lake, thereby reducing sediment re-suspension and turbidity. The improved water quality will stimulate the growth of submergent and emergent aquatic vegetation on the lee side of the island for waterfowl consumption, not realized to date. Migratory waterfowl have benefited from the reliable food resources and loafing areas that the Islands and Forested Wetland Management Area (FWMA) provide during migratory periods. Creation of the Islands, removal of the East River channel silt plug and the dredging of the access channel have created additional shoreline and restored flowing side channel aquatic habitat, rare along the Illinois Waterway. The rock closure structure is reducing the amount of sediment that is entering the Barrier Island Channel and is allowing for over-wintering fish habitat.

FINANCIAL DATA:

General design costs were $962,000, and construction costs were $3,457,000. In accordance with Section 906(e) of the 1986 Water Resources Development Act (Public Law 99-662), general design and construction costs were shared on a 75% Federal/25% non-Federal basis for features located on State-owned lands. The non-Federal sponsor, the Illinois Department of Natural Resources, is responsible for annual operation, maintenance, and repair costs, estimated at $19,800.

STATUS:

The contracts for the Stage I - Forested Wetland Management Area, the Stage II - Barrier Island and East River Enhancement, and the re-vegetation contract were completed by July 1996. A final contract to create an underwater weir (rock closure structure) was awarded and completed in September 1997. The project is complete and being financially closed out. A draft of the initial performance evaluation report was sent out for agency review in January 2000. A final copy of the Peoria Lake Rehabilitation and Enhancement Project, Initial Performance Evaluation Report dated March 2001 was sent out early April 2001.